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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,732	05/20/2005	Andreas Schilling	1093-128 PCT/US	2838
23869	7590	08/02/2006	EXAMINER	
HOFFMANN & BARON, LLP 6900 JERICHO TURNPIKE SYOSSET, NY 11791			ASSAF, FAYEZ G	
			ART UNIT	PAPER NUMBER
			2872	
DATE MAILED: 08/02/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/535,732	Applicant(s) SCHILLING ET AL.	
	Examiner Fayez G. Assaf	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/20/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph: The terms "particularly" and "preferably" in claims 1, 2, 8 and 9 are relative terms which render the claim indefinite. Said terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the language of the claim recites the phrases "other grating constants" and "some similar structure" which are ambiguous, in that, the metes and bounds of the claim cannot be ascertained.

It is noted that the use of the brackets in the claim 1 is improper: It is not clear whether the bracketed language is part of the claim or not.

Corrections are required.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 5 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleemann et al. (US 2005/0073746 A1).

Regarding claims 1, 5 and 9-11, Kleemann discloses a layer arrangement, which exhibits at least two superposed layers of material (Fig. 12, paragraph [0062]), of which at least that facing the observer in use is or are transparent and between which an interface is formed which exhibits, at least in one area thereof, a diffractive optical structure producing some lens-like effect, either magnifying or de-magnifying (paragraph [0038] and [0039]), wherein the diffractive optical structure producing the lens-like effect is designed such that the grating structure, including the line frequency is varied continuously over the surface of the structure to form a binary structure or a blaze structure (See Fig. 1) in which one of the walls of each grating groove run parallel to each other and approximately

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parallel to a perpendicular to the principle plane of the interface layer, while the angle of the other wall of each grating groove relative to a perpendicular to the principle plane of the interface layer varies substantially continuously over the area of the lens structure (See Fig. 1 to Fig. 4). Kleemann does not explicitly teach the grating depth of the lens structures being not more than 5, 10 or 2 μm .

However, the determination of the optimum or workable ranges of grating depth variable might be characterized as routine experimentation relating.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide such grating depth, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. One would have been motivated to determine the grating depth to be less than 10 μm (for the intended use of wavelength(s)) so as to achieve maximum diffraction efficiency.

In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 2, Kleemann discloses the layers being transparent and exhibit a different refraction index (line 10 to line 14 of [0062]).

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Regarding claim 8, Kleemann discloses the lens structures having a diameter ranging from 0.15 to 300 mm (See [0053]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fayez G. Assaf whose telephone number is (571) 272-2307. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or

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access to the automated information system, call 800-786-9199

(IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Fayez G. Assaf', with a stylized flourish at the end.

Fayez G. Assaf
Primary Examiner
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7/25/2006